

[SYSTEMS FOR DEEP RESISTIVITY WHILE DRILLING FOR PROACTIVE GEOSTEER- ING]

Abstract

A method for geosteering while drilling a formation includes generating a plurality of formation models for the formation, where each of the plurality of the formation models includes a set of parameters and a resistivity tool therein and locations of the resistivity tool differ in the plurality of the formation models. The method may also include computing predicted tool responses for the resistivity tool in the plurality of formation models, acquiring resistivity measurements using the resistivity tool in the formation, and determining an optimum formation model based on a comparison between the actual tool response and the predicted tool responses. The method may also include steering a bottom hole assembly based on the optimum formation model.